The Newsletter of the Wisconsin Laboratory Certification and Registration Program

LABNOTES *Fall 2003*

Ch-ch-changes

The recent past has been a difficult time to maintain stability and direction in the Laboratory Certification & Registration program due to government wide reduction, streamlining, etc. We have done the best we can to stay focused on the jobs at hand in the program and to get minimally sidetracked. But truth be told, the entire reduction effort has been an overall drain of energy. I believe the landscape will stabilize soon and we can proceed with progress and improvement with audit related goals and NR 149 code revision progress. Over the course of the last couple months, two of our colleagues have transferred elsewhere in the agency. Phillip Spranger and Donalea Dinsmore have both taken positions in the Air Management Program. Related to Phillip and Donalea transferring, Rick Mealy will serve as the "Program Chemist" – that includes the set of functions that Phillip Spranger was performing.

The Laboratory Certification & Registration Program has undergone some changes in the face of state-wide budget reductions and streamlining.

Over the coming months, we may evolve and change more, as overall agency reductions are not yet complete. We will try and keep people informed if or when any changes occur with staff, their geographic responsibilities, etc. Don't hesitate to contact me or others in the program if you want or need updates. □

David Webb
Chief, Environmental Science Services Section

Also in this Issue:

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Web Site: www.dnr.state.wi.us/org/es/science/lc

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LabNotes

Newsletter of the Laboratory Certification Program

LabNotes is published twice annually by the Wisconsin DNR Laboratory Certification and Registration Program. For information about distribution or to make suggestions for future articles, contact the editor.

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This document is available electronically at www.dnr.state.wi.us/org/es/science/lc.

This document is intended solely as guidance and does not include any mandatory requirements except where requirements found in statute or administrative rule are referenced. This guidance does not establish or affect legal rights or obligations and is not finally determinative of any of the issues addressed. This guidance does not create any rights enforceable by any party in litigation with the State of Wisconsin or the Department of Natural Resources. Any regulatory decisions made by the Department of Natural Resources in any manner addressed by this guidance will be made by applying the governing statutes and administrative rules to the relevant facts.

Meetings & Training Opportunities

Operator Certification Exams

DNR will hold Wastewater, Drinking Water and Septage Operator Certification exams on May 5, 2004 (*postmark deadline April 7, 2004*) and November 3, 2004 (*postmark deadline October 6, 2004*) in DNR Regions around the state. Check the Op Cert. web site for details, as they become available. Application packets will be mailed in February 2004. □

www.dnr.state.wi.us/org/es/science/opcert

2004 Conferences, Meetings

MWAA Winter EXPO

The Midwest Water Analysts Association has scheduled Winter EXPO 2004 for January 30, 2004 at the Bratstop Banquet Center in Kenosha. Contact Larry Dressel at (630) 369-5586 for info.

www.midwestwateranalysts.org

Government Affairs Seminar

The Government Affairs Seminar (jointly sponsored by Wisconsin DNR, Wisconsin

Section of the Central States WEA, Wisconsin Wastewater Operators Association, Municipal

Environmental Group and Wisconsin League of Municipalities) will be held February 26, 2004 at the Marriott Madison West, in Madison. □

WRWA Annual Conference

The Wisconsin Rural Water Association holds its annual conference on April 6 through 8, 2004 at the Green Bay Regency Suites and KI Convention Center complex. Call (715) 344-7778 or visit their web site for more information.

www.wrwa.org

WWA Annual Conference

The Wisconsin Water Association (formerly AWWA WS) annual conference is scheduled for September 22 through 24, 2004 in Milwaukee. Contact Jack Albrechtson at (608) 831-6554 for more information.

www.wiawwa.org

WWOA Annual Conference

The Wisconsin Wastewater Operators Association annual conference is to be held October 26 through 29, 2004 at the Kalahari Resort in the Wisconsin Dells. Check the WWOA web site for more details. □

www.wwoa.org

WRWA Training for Lab Analysts

The Wisconsin Rural Water Association offers Laboratory-related Training. As this issue went to press, no classes were listed on their website.

Contact Rural Water at (715) 344-7778 or visit their web site for more information. □

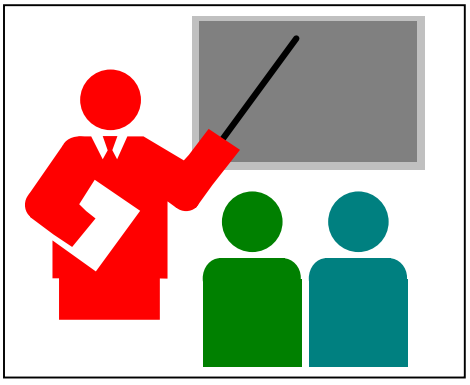
www.wrwa.org

Tech. College Training Offered

Lab Analysis 1	February 17-19, 2004
Fond du Lac/MPTC	(800) 221-6430
Lab Quality Assurance1	March 23-24, 2004
Green Bay/NWTC	800 422-6982 x5444
Wastewater Math	March 25, 2004
Appleton/FVTC	(800) 221-6430
Laboratory Analysis 2	April 28-29, 2004
Eau Claire/CVTC	(800) 221-6430

BTC: Blackhawk Technical College
CVTC: Chippewa Valley Technical College
FVTC: Fox Valley Technical College
NWTC: Northeast Wisconsin Technical College
MPTC: Moraine Park Technichal College

www.dnr.state.wi.us/org/es/science/opcert/training.pdf
□



Program Administration

Correction to Spring 2003 LabNotes

An article on page 6 of the last edition of LabNotes discussed a re-assignment of Northern Region laboratories to two auditors, but only mentioned one of the two auditors involved. The article neglected to mention that, effective July 1, 2003, John Condron—certification officer stationed in Madison—assumed responsibility for the eastern half of the Northern Region. This assignment comes in addition to his existing responsibilities for Fond du Lac county and the entire Southeast Region.

In summary, effective July 1, 2003, John's laboratory responsibilities, by county, are as follows:

Florence, Fond du Lac, Forest, Kenosha, Langlade, Lincoln, Milwaukee, Oneida, Ozaukee, Racine, Sheboygan, Vilas, Walworth, Washington, and Waukesha

John has contacted and will continue to contact each of his assigned laboratories when it is time to schedule a lab evaluation, but feel free to call John with any questions that you may have in the interim.

Contact Information:

John Condron – SS/BW
101 South Webster Street, PO Box 7921
Madison, WI 53707-7921
(608) 267-2300
john.condron@dnr.state.wi.us □

NR 149 Revision Update

The NR 149 Revision Advisory Committee (RAC) met for the last time this year on November 20, 2003. The RAC leaders, Diane Drinkman and Alfredo Sotomayor will be preparing a code draft based on the input received from the Committee. In late spring 2004 the RAC will reconvene to discuss this draft and based on comments received will prepare a proposal for public comment in the summer or fall of 2004. □

www.dnr.state.wi.us/org/es/science/lc/nr149

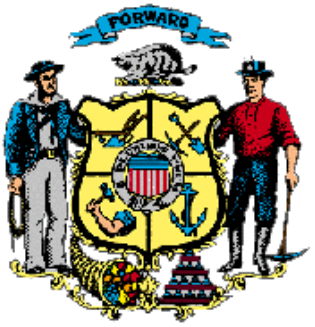
DNR to Update Chapter NR 219, Wis. Adm. Code

The Department of Natural Resources will be seeking approval from the Natural Resources Board to hold public hearings on updating Chapter NR 219, Wis. Adm. Code, at the February meeting of the Board. If approved, hearings will be held in April of 2004. Those things to be revised include:

1) Update method references to add the 19th and 20th editions of "Standard Methods for the Examination of Water and Wastewater" (01/16/2001 and 10/23/2002 Federal Register).
2) Update method references to more recent references from ASTM, AOAC, and USGS (01/16/2001 and 10/23/2002 Federal Register).
3) Add test methods for *E. coli*, *enterococci*, *cryptosporidium*, and *giardia* (07/21/2003 Federal Register, corrections in 09/19/2003 Federal Register).
4) Update the reference "State of Wisconsin Aquatic Life Toxicity Testing Methods Manual", to the current edition (2003, 2nd Edition).
5) Add new method for cyanide (OIA-1677) (12/30/1999 Federal Register).
6) Update method for low-level mercury (10/29/2002 Federal Register).
7) Update methods from EPA reference SW-846.
8) Add test methods for extraction, extract clean up, and quantification of PCBs in sludge.

The last time chapter NR 219 was revised to update methodology references was in 1996. The rule package will be available on the DNR web. □

www.dnr.state.wi.us/org/nrboard/rules/



Looking for a Few Good Labs

Do you know of a "top notch" lab that deserves some statewide recognition? As the WI Department of Natural Resources has done since 1996, we are planning to recognize two labs for the "2004 Lab of the Year Award".

Now wait a second….before all you duck hunters start thinking about nominating your hunting dogs; "Lab" is short for Laboratory. We know that there are many outstanding labs in this state and we want to have the opportunity to acknowledge them for their exceptional efforts.

One award is presented in each of two categories: Small Registered Facility and Large Registered Facility. Small facilities include municipal wastewater treatment laboratories with a flow of less than 1 mgd, or labs that perform limited types of testing (e.g., BOD, nitrogen, phosphorus, and solids). Large facilities may include major municipal wastewater treatment laboratories with flows greater than 1 mgd, labs that perform tests of greater complexity (e.g., metals, PCBs, VOCs) or labs that process a large volume of samples annually.

Nominees for the award must be registered facilities located in the State of Wisconsin. Certified laboratories will not be considered. Anyone, including DNR staff, can nominate a laboratory for one of the awards, but laboratories may not nominate themselves. There is no limit on the number of times that a laboratory may be nominated, and a laboratory may be nominated for (or receive) an award in consecutive years. In the event that insufficient nominations are received for either category, the Department reserves the right to not issue either award. To nominate a registered laboratory for the 2004 Lab of the Year Award, complete the a nomination form and include a summary of no more than three pages describing the reasons why you are nominating the laboratory for the award.

Nomination forms are available from Camille Johnson, WI DNR, 1300 W. Clairemont Ave., Eau Claire, WI 54702.

Email: camille.johnson@dnr.state.wi.us,

Phone: (715) 831-3272

FAX: (715) 839-1605

Key considerations for the award determination include *(please note - all considerations do not necessarily have to be addressed for a laboratory to be chosen to receive the award*):

Nomination Considerations:

Does the laboratory demonstrate a commitment to exceeding the minimum requirements for compliance with Department rules and guidance?

Has the laboratory demonstrated a high level of commitment to correcting instances of non-compliance?

What measures does the laboratory take to ensure the production of high-quality data?

Does the laboratory's quality assurance program ensure that quality control data is used to evaluate and improve laboratory procedures?

For which other practices or achievements should the laboratory recognized?

Completed nomination forms must be received by January 31, 2004 in order for the candidate to be considered. A nomination committee will decide who the award winners will be. Please send us your nominations for all those top-notch labs (*and leave your dogs out of it* ☺)! □

Audit Stress

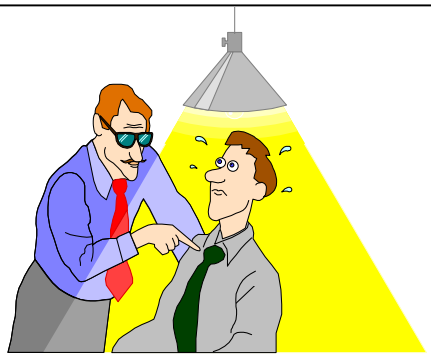
By: Camille Johnson, Lab Certification Officer

I often see or hear reference to a DNR audit as if it were a time of impending doom. Contrary to some public opinion, we are not the IRS. While it is true that serious deficiencies could lead to enforcement action, the audit does not have to elicit such a negative reaction. If you have been doing your best work, documenting your actions, and reporting your data correctly then the audit should not be something to fear. Instead, look at the audit as a time for you to have a DNR chemist on-site to trouble shoot with you, help you improve your practices and give you positive feedback. If you have a list of questions or concerns ready before the auditor arrives, they will surely make time to address your concerns. I personally learn something new at every lab I visit.

If you have been doing your best work, documenting your actions, and reporting your data correctly then the audit should not be something to fear

In addition, we are always looking for feedback on the audit process and suggestions for the Lab Certification Program as a whole. At some point during the audit your auditor should leave a one-page survey form with you. This is your chance to evaluate your audit experience – so please fill it out and send it in. If he/she forget to leave a survey form contact your auditor for one, or call the Section Chief, David Webb at (608) 266-0245 to have one mailed to you. The evaluation forms go directly to David Webb and your auditor will not have access to your responses. Mr. Webb gives the auditors general feedback on the surveys, but no specifics are shared.

You can have a voice in the audit process and it can be a good experience for all those involved.



Some key points to keep in mind:

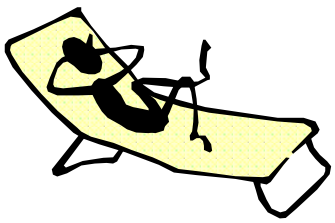
The audit <u>can</u> be…

- …a time to trouble-shoot with the help of your auditor.
- …a chance to get <u>positive</u> feedback.
- …documentation of the great job you are doing.
- …a chance to discover errors, or program changes you may have missed.
- …an opportunity to send in an evaluation of the experience.

Your auditor should…

- …work with you to set up the audit at a convenient time for all parties.
- …be willing to work around your schedule.
- …complete the audit each day by your normal quitting time.
- …provide technical guidance.
- …clarify regulatory requirements.
- …give a closing conference which details positive feedback, deficiencies and enforcement action if any is needed.
- …send a written report to you within a reasonable time frame.

Sounds like work, huh? Well…I didn't say it would be fun, did I? We hope that the audits can be a positive learning experience for all of us. If you still feel great stress about your upcoming audit then take a few deep breaths and remember your auditor wants this to be a good experience just as much as you do! I hope your next audit is a less stressful event!



Administering Certification for PAHs by GC/MS – SIM

Over the past year, more labs have begun inquiring about the viability of analyzing samples for polynuclear aromatic hydrocarbons (PAHs) using GC/MS operated in selected ion monitoring mode, or SIM. This is essentially a procedure in which the sensitivity of a GC/MS analysis can be increased by monitoring only those ion fragments unique to the selected compounds of interest instead of monitoring a full range of possible ion fragments for a much larger group of compounds. Operating the MS in SIM mode effectively increases the sensitivity of a PAH determination by a full order of magnitude, thus making GC/MS a viable alternative for much of the ppb-level PAH testing that could previously only be performed by HPLC.

PAHs are a subset of the group of semivolatile organic compounds generally referred to as BNAs, or base/neutral/acid extractable compounds. Currently, the Laboratory Certification Program administers certification to perform PAH analysis by GC/MS in SIM mode either under Test Category 12 (Semivolatiles by GC/MS) – BNAs, or Test Category 19 (Single analyte or analyte group). The problem with administering certification under either of these is that the certificate does not explicitly convey a laboratory's ability to perform such testing to their potential clients. Furthermore, the PAH concentrations in most BNA reference samples are not representative of the concentration range to which SIM mode would be applied.

In response to these concerns in light of the new interest in obtaining such certification, the laboratory certification program will soon begin administering certification to perform PAH testing by GC/MS in SIM mode as a separate test under Test Category 12. The test will appear on certificates under Test Category 12 as "PAHs by GC/MS – SIM", as it appears now on the certificates of those laboratories certified for the parameter under Test Category 19.

Because, as explained previously, PAHs are a subset of the BNA analyte group, for which the Department is authorized to administer certification to perform testing by GC/MS under Test Category 12, this does not represent a new certification parameter. Rather, it's just a means of explicitly tracking a lab's capacity to analyze samples for a specific subset of BNA compounds while operating the MS in a certain mode. For the time being, labs currently certified for BNAs under test category 12 remain within their authority to analyze samples for PAHs in SIM mode.

Within the coming weeks, letters will be sent to all laboratories currently certified for BNAs under test category 12. Those labs wishing to analyze samples for PAHs by GC/MS – SIM will be instructed to return an application form, and new certificates displaying the new "PAHs by GC/MS – SIM" code will be printed and mailed upon receipt of a completed application. No application fee or additional reference sample will be required provided the application is returned by a date that will be specified in the letter. The revised certificates will be valid through the end of the current certification period (August 31, 2004). Revised certificates will automatically be sent to labs currently certified for BNAs under Test Category 19. Letters will not be sent to labs currently not certified for BNAs under Test Category 12. Labs not currently certified for this parameter that wish to obtain certification for PAHs by GC/MS – SIM will have to submit an application, pay the standard revised application and test category fees, and likely submit to an audit before certification will be granted.

In order to renew certification for the PAHs by GC/MS – SIM parameter, labs will have to pay only the same Test Category 12 fee paid annually to renew their BNA certification. Labs will also have to analyze a separate reference PAH reference sample with concentrations at the ppb level. This is essentially the same reference sample concentration range that is currently required to maintain certification for PAHs by HPLC under Test Category 13.

Letters will likely be mailed by the end of January. If you have any question, please contact either Greg Pils (608-267-9564, gregory.pils@dnr.state.wi.us) or Rick Mealy (608-264-6006, richard.mealy@dnr.state.wi.us). ☐

Council Corner

By Paul Junio, Council Chair

The new year approaches as I write this, and the Council welcomes another new member, Kurt Knuth of the Madison Metropolitan Sewerage District. Kurt replaces Debbie Cawley as the ting Large Municipal Wastewater Treatment Facility representative. I'll let Kurt tell you a little about himself:

Kurt Knuth,

Madison Metropolitan Sewerage District

I graduated from the University of Wisconsin - River Falls in 1995 with a Bachelor of Science in Chemistry. After graduation, I took a position in the laboratory at the Madison Metropolitan Sewerage District, where I have been employed for over eight years.

For the first seven years, I was a staff Chemist and resident "Computer Guy." As a chemist, I have had experience analyzing samples for solids, BOD, nutrients, anions, and metals, while my days as computer guy were mostly filled with Visual Basic programming and database administration. While I remain on as the lab's computer guy, a year and a half ago I traded in my staff Chemist title to take over as the Laboratory Manager. Now I spend my time overseeing the day-to-day operation of the lab, and, of course, to make sure we are in full compliance with NR149.

The Madison Metropolitan Sewerage District is unique as we are not part of the City, nor are we owned by a private company. Technically we are a non-profit municipal corporation that was founded under state statute in 1930. The District currently receives wastewater from over 40 municipal customers in Madison and surrounding communities which consist of about 300,000 people.

I am honored to be appointed to the council as the representative for the Large Municipal Wastewater Treatment Plants. I hope that I can do well to serve my constituency during my time on the council.

Kurt Knuth

Rule Advisory Committee Farewells

As the "final" meeting of the RAC has now come and gone, I'd like to take a moment to thank my fellow Council Members, both current and past, for their participation. During this long trip we've all undergone, we've had 3 Council members' terms expire (Debbie Cawley, David Kollokowsky, and Ruth Klee Marx) and we've seen the transfer of two valuable Certification Staff employees (Donalea Dinsmore and Philip Spranger). I'd like to express my thanks to them also.

Finally, I'd like to thank some of the non-members of the RAC who so often attended the meetings and offered their comments, Barb Burmeister, Paul Harris (who attended in my place on more than one occasion), Sharon Mertens, and Amy Tutwiler. Our work isn't done yet, but we've accomplished a very large task. Thank you! □

Current LabCert Council Members

Representation (Firm)	Name(Phone #)
Industrial Lab	**Jim Kinscher**
Modine Manufacturing	(262) 636-1278
Commercial Lab	(*Chair*) **Paul Junio**
TestAmerica	(920) 261-1660
Public Water Utility	**Katie Edgington**
Janesville Water Utility	(608) 755-3115
Sm. Municipal WWTP	**Randy Herwig**
City of Lodi	(608) 592-3247
State Lab	(*Vice Chair*) **George Bowman**
State Lab of Hygiene	(608) 224-6279
Lg Municipal WWTP	**Kurt Knuth**
Madison MSD	(608) 222-1201 x 293
Demonstrated Interest	(Sec.)**Marcia Kuehl**
M.A. KUEHL, Co.	(920) 469-9113
Solid & Haz. Waste Facility	Vacant
Agricultural Interest	Vacant

Proficiency Testing

Requirements and Deadlines

Laboratories must analyze a reference sample for each test for which a reference sample is required between January 1 and August 31 each calendar year. The August 31 date is critical! Results must be reported to the Department prior to September 1 (meaning August 31 at midnight) or the laboratory's certification for the test will not be renewed on September 1. A lab that analyzes a reference sample on August 31 may not be able to get the acceptable result reported to the Department for renewal, unless the reference sample provider agrees to fax the graded results to the Department by midnight on August 31. Worse yet, a laboratory waiting until the last minute may get an unacceptable result, which means the laboratory's certification or registration will not be renewed for the test for the new certification or registration cycle.

A laboratory that is not renewed for one or more tests must immediately cease performing the analysis for the test(s), and subcontract the work out to a certified laboratory. If the laboratory wishes to have it's certification or registration reinstated for a test, an application, appropriate fees and all required background materials (including acceptable reference sample results) must be submitted to the Department. An onsite evaluation may be required prior to reinstatement.

Contact Rick Mealy at (608) 267-7633 or by e-mail at richard.mealy@dnr.state.wi.us for more information. □

Reference Sample Timeline for 2004

January 1	PT studies must close after January 1 to be counted for the fiscal 2005 certification and registration cycle (9/1/2004 to 8/31/2005).
August 31	Acceptable results must be received by the Department by midnight.
September 1	Laboratories that did not submit acceptable reference sample results for each test for which they are required prior to September 1 are not renewed for those tests, must cease performing analyses for the analytes, and are required to subcontract the work to a certified laboratory. Reapplication is necessary.

Tips to Avoid Renewal Problems

As with every year, a substantial number of laboratories in the Program found themselves with gaps in their certifications due to reference sample problems during the renewal process. In addition to the fiscal (application fees) burden, this oversight can result in loss of valuable clients or hamper site investigations. Department Programs may not accept data generated during a lapse in certification.

While the Laboratory Certification and Registration Program sends letters out each June to those facilities that are lacking acceptable reference sample results for one or more parameters, there are some things each lab should do to ensure that certification renewal progresses smoothly.

1. Register with an approved provider for each certified parameter as soon as possible after January 1 each calendar year. Reference sample results issued prior to January 1 of each calendar year cannot be used for annual certification renewal process, which begins each May. A list of certified providers contact info is available at: http://www.dnr.state.wi.us/org/es/science/lc/download/PT%20Provider%20Contact%20Info.pdf

   A list of parameters that each certified provider has been approved to provide for Wisconsin certification is available at: http://www.dnr.state.wi.us/org/es/science/lc/download/PT%20Provider%20Parameter%20Approvals.pdf

2. Participating in a study early will provide you with sufficient time to participate in a remedial study for any parameters scored as unacceptable.

3. Be aware of how Wisconsin scores reference sample results when a study consists of more than one concentration level, when results for more than one method are reported for a single parameters, or for multi-analyte methods (e.g., volatiles, pesticides). Remember that your chosen provider's scoring is analyte specific. Review the Certification Program's publication dealing with these and other reference sample issues at: http://www.dnr.state.wi.us/org/es/science/lc/download/ptguide.pdf.

4. Remember that the "key analyte" for test category 01 is BOD. Therefore, whether you wish to be certified for BOD, carbonaceous BOD (cBOD), or both, a BOD (uninhibited) reference sample is required.

5. An acceptable reference sample for PAHs by HPLC (test category 13) or for low level PAHs by SIM GC/MS is one in which the concentrations of all spiked analytes are typically in the low-ppb to sub-ppb range (approximately 0.1 to 5 ppb). Be sure to tell your provider that your reference sample must be one that complies with Wisconsin requirements.

Do not participate in only a DMRQA PT sample study to satisfy both DMRQA and Wisconsin certification renewal requirements UNLESS you are certain that results will be available to us prior to September 1 during the renewal process. Even if you participate in such a study, any "not acceptable" parameters will result in a lapse in your certification. □

Cross Media Issues

National Environmental Data Standards

EPA along with State and Tribal organizations are working on national standards for environmental data. This activity is lead by the Environmental Data Standards Council (EDSC). There is a draft standard for "Environmental Sampling, Analysis and Results". Comments on the standard are due to EDSC by March 12, 2004. A copy of the data standard and FAQ sheet is available on the DNR web-site at:

http://www.dnr.state.wi.us/org/es/science/ls/Lab_data/Index.htm#National

Wisconsin Legislative Notifications Website now available

The Wisconsin Legislative Reference Bureau recently announced the availability of the Wisconsin Legislative Notifications Website.

Citizens using the system will receive daily or weekly e-mails when specified legislative activity occurs. For example, users may choose to be notified about of every action affecting a specific proposal, bills introduced by a particular legislator, activities of a specific committee, or introductions relating to a particular topic.

This service is designed to make it much easier for citizens to follow the activity of the Legislature. □

http://notify.legis.state.wi.us/Home.aspx

Drinking Water

Electronic Data Submittal System

The Department's Bureau of Drinking and Groundwater will be requiring that all-monitoring data for public water supplies be electronically submitted to the Department of Natural Resources. The effective date of this requirement will be January 1, 2005. Currently, two laboratories are electronically reporting. There are a number of acceptable formats for the data. These include four different tab delimited formats and an XML format.

There are also plans to develop an internet-based application for labs to directly enter test results. This should be on-line within the upcoming year. For additional information, contact either

Ron Arneson (Ronald.Arneson@dnr.state.wi.us; 608-264-8949

or Gail North (Gail.North@dnr.state.wi.us;

608-264-6131). □

www.dnr.state.wi.us/org/es/science/ls/lab_data/file_layout.htm

Wastewater Focus

Further Clarification of BOD and TSS Reporting Requirements

Greg Pils, Laboratory Certification Program Coordinator

Many of you received a letter this past October clarifying the Department's reporting requirements for BOD and TSS. Since then, we've been approached with several questions and concerns about the expectations for laboratories performing this testing as they relate to the reporting requirements discussed in the letter. In the following paragraphs, I hope to provide you with some background information and further explanation that should clarify the reasons for implementing these policies and the expectations for laboratories performing BOD and TSS testing.

The reporting and associated sample analysis requirements for BOD and TSS discussed in the letter stem from the effluent monitoring data quality needs of the Department's Watershed Management program. Watershed Management staff must be able to effectively assess a facility's compliance with the BOD and TSS levels in its permit. Many WPDES permittees have very stringent permit effluent limitations. As such, BOD and TSS results must be reported to levels at or below the associated permit levels in order to be viable for assessing compliance. BOD or TSS results that are reported as less than a detection limit that was elevated to adjust for sample dilution considerations have minimal value for assessing permit compliance if the elevated detection limit is greater than the limit in the facility's permit. In many instances, this means that labs must pursue the lowest possible reporting limits that the methods can achieve. It is important to note that it may not be necessary to provide labs with such volumes of sample in all instances. Laboratories need analyze only the volume of sample necessary to report a result greater than the required reporting limits.

DNR staff developed these reporting limits with the assistance of Standard Methods committee members. The reasoning behind their development is discussed in detail in the paper "Recommendations of the BOD LOD Technical Group", which was mailed with the letter. In a nutshell, the Technical Group concluded that the BOD and TSS methods are both capable of achieving detection limits of 2 mg/L, provided that labs analyze a sufficient volume of sample. This means analyzing an undiluted 300 mL aliquot of sample for BOD, and filtering at least 500 mL of sample for TSS. Laboratories analyzing samples for BOD and TSS for compliance with WPDES permits will be expected to take certain measures to ensure that they are able to analyze these volumes of sample, if necessary.

These expectations depend on the level of control the laboratory has over the volume of sample available for analysis. Laboratories that are part of or directly associated with a WPDES permitted facility should have more control over this situation, as they are generally located on the same site. Such laboratories will be expected always to have sufficient sample available to obtain the required reporting limits, and will be cited as deficient if an audit reveals that reporting limits are elevated because the lab is not analyzing a sufficient volume of sample.

Expectations may be different for independent laboratories that are not part of a WPDES permitted facility, but are contracted by permittees to perform testing for compliance with their permit. We understand that such laboratories have limited control, if any, over the volume of sample the permittee provides them for BOD and TSS testing; especially if the laboratory does not provide the permittee with the sample containers. Independent laboratories that do supply WPDES permittees with sample containers will be expected to provide enough containers of sufficient size to assure that the permittee will be able to provide a sufficient volume of sample to the laboratory to meet the required reporting limits when necessary. Independent labs that fail to supply enough containers or containers of sufficient volume will be cited as deficient in this regard.

Continued next page

***BOD & TSS Reporting Clarified**, continued.*

We also understand that even when supplied with the necessary size or number of sample containers, a permittee may not necessarily return a sufficient volume of sample for the laboratory to meet the required reporting limits. We indeed recognize that the laboratory has no control over such situations, and will not cite the laboratory as deficient under such circumstances. In these cases, the Watershed Management program will follow up with the permittee to explain the importance of returning all supplied containers, and may initiate enforcement action against permittees who refuse to provide the laboratory with sufficient sample volume.

Regardless of the level of control a laboratory may have over the volume of sample available for testing, there must be a mutual understanding of the permit conditions related to the analytical work the laboratory is to perform when a laboratory establishes a contractual or other relationship with a permittee. Although the permittee is indeed ultimately responsible for assuring compliance with the permit, the laboratory has a responsibility to provide information that conforms to permit conditions as well. Consequently, it is very important that laboratories and permittees must maintain open lines of communication to ensure that all needs are addressed.

In closing, I wish to address a final concern that the Department was focusing its attention in this matter only on the labs, and not the WPDES permittees who collect the samples. The Department definitely recognizes the responsibilities of the permittees. The letter sent to laboratories did not address the responsibilities of the permittees because the authority to regulate them does not reside within the Laboratory Certification Program. Instead, the Bureau of Watershed Management sent correspondence similar to the letters sent to laboratories to all WPDES permittees under separate cover explaining that they will be expected to submit appropriate volumes of sample necessary for labs to obtain the required limits of detection. Laboratory Certification Program and Watershed Management staff will continue to work together to ensure that all parties involved are held to the standards necessary to provide the Department with the data necessary to effectively assess compliance with WPDES permits.

I hope this clarifies the needs for the BOD and TSS reporting requirements and addresses any concerns about how they will be enforced. Please contact Greg Pils at (608) 267-9564 or gregory.pils@dnr.state.wi.us with any further questions you may have. □

Importance of Preservation for Ammonia Testing in Wastewater

By Judy Hayducsko

Most wastewater operations will be continuing or starting to sample for ammonia nitrogen in the next few years. In order to accurately determine the ammonia concentration in wastewater, it is vital that the sample be acidified immediately and that the sample be kept chilled. The sampling requirement calls for the addition of sulfuric acid (H_2SO_4) to bring the sample pH to less than 2 s.u.. Typically, in a 250 mL bottle, this will require 1-2 mL of acid, depending on the acid strength. If you are sampling, remember to add the acid. If you are analyzing ammonia for someone else, make sure they acidified the samples or have them resample. □

DMR Reporting: What Parameters MUST you report LOD/LOQs for?

By Rick Mealy, Program Chemist

One of the most confusing aspects of completing the monthly DMR form is remembering which parameters require a facility to report the analytical limit of detection (LOD) and limit of quantitation (LOQ). To provide a measure of clarity, I have summarized the requirements below:

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Typical Wastewater Parameters

DMR Parameter#	Parameter	Report LOD/LOQ?
112	Chlorine, Total Residual	YES
789	Nitrogen, Ammonia (NH3-N)	YES
388	Phosphorus, Total	no
457	Suspended Solids, Total	no
66	BOD5, Total	no
649	cBOD5	no
	Process Control parameters	no

Other Wastewater Parameters

	Additives	no
	Except *formalin, hydrogen peroxide)*	
	Herbicides	YES
	Semivolatiles (BNA)	YES
	Volatiles (VOC)	YES
	PCBs	YES
	Organochlorine Pesticides	YES
	Nitrogen Pesticides	YES
	Metals,Dissolved	YES
	Except *Ca, Mg, Na, K, B, Fe, Mn*	
	Metals,Total Recoverable	YES
	Except *Ca, Mg, Na, K, Fe, Mn*	
	General Chemistry	*varies*
328, 330	*Nitrate*	YES
769	*Nitrite*	YES
335	*Total Kjeldahl Nitrogen(TKN)*	YES
829, 152, 155	*Cyanide*	YES
77	*Bromide*	YES
717	*Chlorine Dioxide*	YES
217, 736	*Fluoride*	YES
342, 651	*Oil & Grease (and HEM)*	YES
382	*Phenolics*	YES
471	*Sulfate*	YES
472	*Sulfide*	YES
473	*Sulfite*	YES
474, 475	*Sulfur*	YES

Post -Disinfection Sample Collection? Then BODs need to be seeded!

by John Condron, Lab Certification Officer

Many Wisconsin Pollution Discharge Elimination System (WPDES) permits require that effluent composite samples be disinfected before discharge. Unfortunately, the point of sample collection is frequently downstream of disinfection. It's a fact that most disinfected samples do not have sufficient microbial populations necessary for BOD testing. As we know, a healthy population of microorganisms is critical to performing the BOD test. Consequently, seeding is in order. Without seeding, BOD results would be expected to be biased low, thereby compromising the receiving stream or water body.

If you disinfect your effluent at any time during the year and your BOD_5 composite samples are collected downstream from disinfection, you must seed your effluent sample when you run the BOD_5 test. Note that this requirement is not limited to disinfection involving chlorination (a common mistake). Seeding is required regardless of the disinfection employed (e.g., ultraviolet (UV), chlorine, or any other technique). Obviously, for facilities that disinfect only in specified months (e.g., May to September) effluent samples would only have to be seeded during the disinfection period.

Failure to seed effluent BOD samples that are collected post-disinfection is a deficient practice that will be cited in an onsite evaluation report. How can this issue be resolved?

If effluent composite samples are collected downstream of any disinfection process, samples must be seeded (when disinfection is occurring). Alternatively, facilities should consult with their assigned Basin Engineer regarding movement of the effluent composite sampler inlet tubing to a point upstream from disinfection.

Please contact your regional certification officer if you have questions. □

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